

2011-13 Cal Poly Catalog

Natural Resources Management & Environmental Sciences Department

BS SOIL SCIENCE

- ☐ 60 units upper division ☐ GWR
☐ 2.0 GPA ☐ USCP

* = Required in Support; also satisfies GE

Note: No major, support or concentration courses may be taken as credit/no credit.

MAJOR COURSES

SS 110 Orientation in Earth and Soil Sciences.....	1
SS 121 Introductory Soil Science.....	4
ERSC 202 Soil Erosion and Water Conservation.....	4
SS 221 Fertilizers and Plant Nutrition.....	4
ERSC 223 Rocks and Minerals	4
SS 321 Soil Morphology	4
SS 322 Soil Plant Relationships	4
ERSC 323 Geomorphology	4
SS 422 Soil Microbiology and Biochemistry	4
SS 423 Soil and Water Chemistry	5
SS 431 Soil Resource Inventory	4
SS 432 Soil Physics	5
⁴ SS or ERSC 461 Senior Project I.....	1
⁴ SS or ERSC 462 Senior Project II.....	3
SS or ERSC 463 Undergraduate Seminar	2
Concentration courses (see below).....	27-28
(7/27/12)	80-81

SUPPORT COURSES

BOT 121 General Botany (B2 & B4)*	4
BRAE 340 Irrigation Water Management (Area F)*	4
CHEM 127 General Chemistry (B3&B4)*	4
CHEM 128 General Chemistry	4
CHEM 129 General Chemistry	4
CHEM 313 Survey of Biochemistry.....	5
GEOL 201 Physical Geology	3
NR/LA 318 Applications of GIS	3
² MATH 118 Pre-Calculus Algebra or MATH 141 Calculus I (B1)*	4
² MATH 119 Pre-Calculus Trigonometry or MATH 142 Calculus II (B1)*	4
³ PHYS 121/PHYS 141.....	4
STAT 218 Appl Statistics-Life Sciences	4
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GENERAL EDUCATION (GE)

72 units required, 20 of which are specified in Support.

→See page 39 for complete GE course listing.

→Minimum of 12 units required at the 300 level.

Area A Communication (12 units)

A1 Expository Writing	4
A2 Oral Communication	4
A3 Reasoning, Argumentation, and Writing.....	4

Area B Science and Mathematics (no add'l units req'd)

B1 Mathematics/Statistics * 8 units in Support	0
B2 Life Science * 4 units in Support.....	0
B3 Physical Science * 4 units in Support	0
B4 One lab taken with either a B2 or B3 course	

Area C Arts and Humanities (20 units)

C1 Literature	4
C2 Philosophy	4
C3 Fine/Performing Arts	4
C4 Upper-division elective	4
Area C elective (Choose one course from C1-C4)	4

Area D/E Society and the Individual (20 units)

D1 The American Experience (40404)	4
D2 Political Economy	4
D3 Comparative Social Institutions	4
D4 Self Development (CSU Area E)	4
D5 Upper-division elective	4

Area F Technology Elective (upper division)

* 4 units in Support	0
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FREE ELECTIVES..... 0-1

(7/27/12) **180**

CONCENTRATIONS (select one):

Environmental Management Concentration

CHEM 312 Survey of Organic Chemistry (<i>transfer equivalent CHEM 212</i>).....	5
CRSC 411 Experimental Techniques & Analysis or STAT 313 Applied Experimental Design & Regression Models	4
ERSC 323 Geomorphology.....	4
GEOG 440 Advanced Applications in GIS.....	4
¹ Approved electives.....	15 4

Select 15 & units from the following:

CHEM 341;	
CRP 212, 336; CRP/NR 404, 408;	
GEOG 440;	
NR 142, 306, 320, 335, 416, 418, 425; NR 311;	
PHIL 340;	
RPTA 302;	
SS 339 [†] , 440, 444, 453	
<i>Corrections effective Summer 2011</i>	28

Environmental Science and Technology Concentration

CHEM 216 or 316, CHEM 217 or 317 (<i>transfer equivalent CHEM 216</i>); (<i>transfer equivalent CHEM 217</i>) Organic Chemistry I, II... 5, 4/5	
Select from: CHEM 218/318, 231/331, 319, 341, 481	8
Select from: ENVE 325, 330, 434, 439; SS 442	6
STAT 313 Applied Experimental Design & Regression Models or CRSC 411 Experimental Techniques & Analysis.....	4
(7/27/12)	27-28

¹ Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.

² Students in the Environmental Science and Technology concentration take MATH 141 and MATH 142.

³ Students in the Environmental Science and Technology concentration take PHYS 141.

⁴ May substitute one of the following senior project courses: ERSC/NR 476, ERSC/NR 477, ERSC/NR 478, ERSC/NR 479 plus one unit of Free Electives is required. (3/10/16)

[†] No more than 4 units of SS 339 may be used.

Land Resources Concentration

CHEM 312 Survey of Organic Chemistry (<i>transfer equivalent CHEM 212</i>).....	5
CRSC 411 Experimental Techniques & Analysis	4
¹ Approved electives.	19

Select 19 units from any one minor, or select 19 units from the following courses.

Note: The prerequisite courses are not listed - check the catalog.

AG 450;
 AGB 321, 370;
 AGED 404;
 ANT 310;
 ARCH 202;
 ASCI 220, 221, 222, 223, 329, 420;
 BIO 112, 114, 161, 162, 325, 415, 427, 435;
 BOT 238, 323, 324, 433;
 BRAE 340, 348, 405, 435, 440, 448;
 CHEM 216, 217, 218, 316, 317, 318, 319, 341, 481;
 COMS 212;
 CRP 212, 214;
 CRSC 203, 333, 445;
 DSCI 101, 121, 230;
 EHS 343;
 ENVE 325, 330, 434, 436, 439;
 ERSC/GEOG 250, 325, 333;
 FRSC 132, 133, 230, 231, 342;
 FSN 121, 125, 341;
 GEOG 150, 300, 301, 308, 340; GEOL 204;
 HUM 302;
 JOUR 205;
 LA 551;
 MCRO 221;
 NR 141, 142, 208, 306, 420;
 NR/GEOG/LA 318;
 NR 311;
 PHIL 321, 331, 337, 340;
 PPSC 311, 321, 327, 431, 441;
 PSY 301, 302;
 RPTA 302;
 SOC 309;
 SS 301, 310, 339[†], 433, 440, 442, 444, 453;
 VGSC 230, 260;

(7/27/12)

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[†] No more than 4 units of SS 339 may be used.